

(a) The section on biological resources (§39-44) needs to be connected to the terminology used in Table 3.2.2. In the table there is only one category called 'other biological resources' so it is not so easy to know exactly what is being discussed in §39-44 labelled "biological resources". It appears to include timber, fish and other biological resources but not soil based on the description – but this is not stated explicitly . Please realize that some may argue that soil is an ecosystem input.

(b) §57 states that, "In general the product component of physical flow accounts will focus on goods that are sold..." Why is only the supply of products the focus and not the use of these products? This is unclear especially since SUTs are the core of the system.

(c) §77 defines wastewater as "water that is of no further use." This seems to be a direct contradiction to what is then described in §77-78 which clearly details how wastewater is then used. We all live downstream. This definition is simply not intuitively satisfying.

(d) §99-100 describe some gross and net calculations. These are not easy to understand and it would help to have some numerical examples to follow the description.

(e) §107 describes the non-resident fuel bunkering. Is there a time aspect that needs to be considered in this situation? Does a fuel bunker owned by a non-resident unit become a resident unit operation after a certain amount of time?

(f) §110 describes the treatment regarding the fuel purchases and resulting emissions from vehicles rented by foreign (non-resident) tourists. Although we agree with the treatment, we would like to state that obtaining this information is not an easy task.

(g) §105-107 states that the treatment is based on the country of residence of the "operator of the transport equipment." What is meant by this with regards to ships? A ship can be owned by one company (resident in country P), flagged in country Q, operated with a crew from country R and with a captain from country S. In the case of ships we disagree with the proposed treatment i.e. using the country of residence of the operator. For ships, ownership rather than operator should be the criterion for determining the country of residence.

(h) Section 3.3.5 "Treatment of losses" includes both definitions and treatments. This is very confusing. Suggest moving the definitions to another section and focus 3.3.5 on treatment of losses.

Physical flow accounts for energy:

(i) Section 3.4.3 only describes the portion of the energy PSUT that shows products. This means that large sections of the PSUT are not explained or described at all. There are 3 main sections, natural inputs, products and residuals and all 3 of these sections need to be described systematically. Although there is a sub-title "Key components of the PSUT for energy" before §145, only energy products are described. The sub-title needs to be changed to "Key components of energy products in the PSUT for energy" and two new sections need to be added for natural inputs and residuals (losses).

(j) Comments to Table 3.4.3 Energy PSUT:

(1) It would be helpful to have a short description about what is different in the Energy PSUT when compared to the General PSUT shown in Table 3.2.1. (2) There are many "totals" shown in the table. None are explained in the text. Why are there all of these different

totals? Somewhere in the supply half of table 3.4.3 a “total supply” row should be shown as is done in the use portion of the table. (3) The placement of “own-account production” in “other industries” is not correct. “Own account production” should be recorded in the industries and households where this activity occurs and not separated out and then added to a category called “other industries”. (4) It seems odd that a product called “fuel wood” is located under the category “natural inputs”. (5) The section called “residuals” itemize groupings of losses. This is not exactly correct. Losses during distribution can be due to theft and are therefore not considered residuals. Should this section be called “losses” and not “residuals”?

(k) §141 describes treatment so seems out of place under this section 3.4.2 Scope and Definitions. It is not clear where the flaring and venting is found in table 3.4.1 but in the general table 3.2.1 it is in cell “J1”. Storage (inventories) is not discussed here and should be because there can be flows of products in and out of storage/inventories/strategic reserves. The terminology in this paragraph is not consistent with that used in the table – see transformation vs. conversion.

(l) Section 3.5.2 Scope and definition of water flows. It is not clear how the structure of the water PSUT differs from the standard set up of the PSUT. The description in the last two sentences of §168 have no clear relationship to the natural inputs, products and residual sections of the general PSUT shown in Table 3.2.1. This is confusing. If water needs to be so different then this needs to be explained and the relations between the general PSUT and the water PSUT carefully shown. Even the terminology is different. In §170 the “four key sections” are totally different from those described for energy in §145 (of course these only describe products so not sure this is the best comparison). This is very confusing and needs to be reconciled with the general PSUT and the 3 key areas, natural inputs, products and residuals in the Supply and the Use framework. In addition, this section is sorely lacking definitions. For example, the definition for abstraction is found in §175, wastewater in §184 and Reused water in §185.

(m) Table 3.5.1 Water PSUT. There are 13 different totals (or sub-totals) in the rows of this table and two columns with totals. Most statistical tables show the total at the top of the list where the aggregated title is the total of those items under it. This is not apparently the way these tables are set up. Why is this different from the general PSUT shown in Table 3.2.1? It is very difficult to know if these totals (or sub-totals) are supposed to be useful for something – like balancing between supply and use? In addition own account production is shown only in the column ‘other industries’. This is not correct. Own account production should be assigned to the industries and households where the activity occurs.

(n) In the table of contents, section 3.6.2 is called “commodity flow accounting” whereas in the body of the text the title is “product...” Terminology should be consistent – product or commodity.

Table 3.6.1 Air emissions account.

(o) It is unclear why the waste management industries are shown first and that emissions are to be shown separately for incineration and for landfill. Where are all of the emissions from the transport carried out by the waste management industry supposed to be recorded? In addition, many landfills are owned and operated by municipalities and not by separate waste management firms or separate LKAUs so they would not be recorded in the ISIC for waste management but in the ISIC for government.

(p) The specification of the different types of pollutants may be subject to change so a final row needs to be added called “other n.e.c.” so this can open for other types of air emissions as the need arises.

(q) A connection needs to be made between the standard PSUT shown in Table 3.2.1 and the air emissions shown in Table 3.6.1. It is not obvious that these are related to each other. The concepts of generation, capture and net air emissions to the environment are not found in the schematic of the general PSUT. It would appear that the generation of air emissions is some type of ‘supply’, capture, transfer and storage is some type of ‘use’ and the net air emissions to the environment would then be the residuals crossing the economy-environment boundary. In reality this table is a recording table and the “air emission accounts” should only show what is called here as “net air emissions to the environment” which would correspond to section J of Table 3.2.1 where the “net” is J1-J2. In other words, the air emissions account is simply a detailed specification of cells J and K shown in the general PSUT. This needs to be clearly stated so you know what you are actually doing in the larger scheme of the PSUT.

(r) §214 states that emissions due to flaring and venting is part of the process of extracting natural gas and crude oil and are included in the air emission accounts and are to be recorded as natural resource residuals. It is unclear where these would be recorded in Table 3.6.1 since there is no portion labelled “natural resource residuals.”

(s) In Table 3.6.2 there are only shown transactions in solid waste in both the supply and use sections of the table. What about liquid wastes? Where should they be entered? Why is the focus only on solid waste? Why are there sub-totals shown in the different sections? It almost seems like the “transactions in solid waste” is adding an additional use into the supply section and an extra supply into the use section.

(t) In §221 measures of waste are often reported in mass units and not volume. Suggest changing the second sentence to begin, “Measures of the amount of waste...” and then neither mass nor volume have been specified.